

Claims

1. A probiotic tablet comprising a probiotic micro-organism and other nutritionally active ingredients, the tablet comprising at least two zones, a first of said zones comprising said probiotic micro-organism, and a second of said zones comprising at least one said other active ingredient kept separated from the probiotic micro-organism of said first zone, the water activity in said probiotic micro-organism containing first zone being no greater than 0.2 and the water content of said tablet being no less than 0.2% by weight.
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2. A tablet as claimed in claim 1, wherein said first zone contains also selenium as a said at least one other active ingredient.
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3. A tablet as claimed in claim 1 or claim 2, wherein said first zone is free from amounts deleterious to the viability of the probiotic micro-organisms of iron.
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4. A tablet as claimed in any preceding claim, wherein said first zone is free from amounts deleterious to the viability of the probiotic micro-organisms of copper.
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5. A tablet as claimed in any preceding claim, wherein said first zone is free from amounts deleterious to the viability of the probiotic micro-organisms of vitamin B6.
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6. A tablet as claimed in any preceding claim, wherein said first zone is free from amounts deleterious to the viability of the probiotic micro-organisms of vitamin C.
7. A tablet as claimed in any preceding claim, wherein said first zone is free from amounts deleterious to the viability of the probiotic micro-organisms of zinc.
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8. A tablet as claimed in any preceding claim, wherein said first zone is free from amounts deleterious to the viability of the probiotic micro-organisms of

manganese.

9. A tablet as claimed in any preceding claim, wherein said first zone is free from amounts deleterious to the viability of the probiotic micro-organisms of chromium.
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10. A tablet as claimed in any preceding claim, wherein said first zone is free from amounts deleterious to the viability of the probiotic micro-organisms of pantothenic acid or its salts.
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11. A tablet as claimed in any preceding claim, wherein said second zone contains iron as at least one said other active ingredient.
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12. A tablet as claimed in any preceding claim, wherein said second zone contains vitamin B6 as at least one said other active ingredient.
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13. A tablet as claimed in any preceding claim, wherein said second zone contains vitamin C as at least one said other active ingredient.
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14. A tablet as claimed in any preceding claim, wherein said second zone contains copper as at least one said other active ingredient.
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15. A tablet as claimed in any preceding claim, wherein said second zone contains manganese as at least one said other active ingredient.
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16. A tablet as claimed in any preceding claim, wherein said second zone contains pantothenic acid or a salt thereof as at least one said other active ingredient.
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17. A tablet as claimed in any preceding claim, wherein said second zone contains zinc as at least one said other active ingredient.
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18. A tablet as claimed in any preceding claim, wherein said second zone contains chromium as at least one said other active ingredient.

19. A tablet as claimed in any preceding claim, wherein said second zone contains any two or more of iron, vitamin B6, vitamin C, pantothenic acid or a salt thereof, zinc, copper, chromium and manganese, each as at least one said other active ingredient.

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20. A tablet as claimed in any preceding claim, wherein the probiotic micro-organism is mixed with a desiccant carrier material serving to reduce the water activity of the zone containing the probiotic micro-organism.

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21. A tablet as claimed in any preceding claim, wherein the second zone contains a desiccant carrier material serving to reduce the water activity of the zone containing the probiotic micro-organism.

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22. A tablet as claimed in claim 20 or claim 21, wherein said desiccant material comprises at least one of carboxymethylcellulose, colloidal silica, polyvinylpyrrolidone, starch, gelatine, hydroxypropylcellulose - low-substituted, microcrystalline cellulose, fumed silicon dioxide, sodium croscarmellose, crospovidone, povidone, magnesium aluminium silicate, methylcellulose, sodium alginate, sodium starch glyconate, gelatine, pregelatinized starch, or sorbitol.

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23. A tablet as claimed in any preceding claim, having a multilayer structure comprising at least two layers, one of said layers constituting said first zone and another of said layers constituting said second zone.

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24. A tablet as claimed in claim 23, wherein said layer constituting said first zone is free of encapsulated iron.

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25. A tablet as claimed in claim 23 or claim 24, wherein said layer constituting said first zone is free of encapsulated zinc.

26. A tablet as claimed in any one of claims 23 to 25, wherein said layer constituting said first zone is free of encapsulated copper.

27. A tablet as claimed in any one of claims 23 to 26, wherein said layer constituting said first zone contains encapsulated vitamin B1.
- 5 28. A tablet as claimed in any one of claims 23 to 27, wherein said layer constituting said first zone contains encapsulated vitamin B6.
- 10 29. A tablet as claimed in any one of claims 23 to 28, wherein said layer constituting said second zone contains encapsulated zinc.
- 15 30. A tablet as claimed in any one of claims 23 to 29, wherein said layer constituting said first zone is contains encapsulated manganese.
31. A tablet as claimed in any one of claims 23 to 30, wherein said layer constituting said first zone contains encapsulated vitamin A, D, E, B12 or B2.
- 15 32. A tablet as claimed in any one of claims 1 to 22, having a multitude of granules constituting said first zone surrounded by a matrix, and wherein said matrix constitutes said second zone or wherein said matrix also contains a multitude of granules constituting said second zone.
- 20 33. A tablet as claimed in any preceding claim, wherein the water content of the tablet is at least 1% by weight.
- 25 34. A tablet as claimed in any preceding claim, wherein the water content of the tablet is at least 2% by weight.
35. A tablet as claimed in any preceding claim, wherein the water content of the tablet is at least 3% by weight.
- 30 36. A tablet as claimed in any preceding claim, wherein the water content of the tablet is no more than 4% by weight.

37. A tablet as claimed in any preceding claim, wherein the water content of the tablet is no more than 5% by weight.
- 5 38. A tablet as claimed in any preceding claim, wherein the water content of the tablet is no more than 6% by weight.
39. A tablet as claimed in any preceding claim, wherein the water content of the tablet is no more than 7% by weight.
- 10 40. A tablet as claimed in any preceding claim, wherein the water activity of said first zone is no greater than 0.15.
41. A tablet as claimed in claim 40, wherein the water activity of said first zone is no greater than 0.1.
- 15 42. A tablet as claimed in claim 41, wherein the water activity of said first zone is no greater than 0.05.
43. A tablet as claimed in claim 42, wherein the water activity of said first zone is no greater than 0.02.
- 20 44. A tablet as claimed in any preceding claim, wherein the water activity of the tablet is below 0.15.
- 25 45. A tablet as claimed in any preceding claim, wherein said first zone is separated from said second zone by a water excluding barrier material.
46. A tablet as claimed in any preceding claim, wherein the tablet is surrounded by a water excluding material.
- 30 47. A tablet as claimed in any preceding claim stored in a container containing a desiccant for absorbing water so as to reduce the water activity in the area surrounding said tablet, and/or containing an oxygen scavenging agent and/or

containing an inert gas atmosphere.

48. A tablet as claimed in any one of claims 45 to 47, wherein a said barrier material is a fat or wax based barrier material.

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49. A tablet as claimed in any preceding claim, wherein said first zone contains also one or more of iodine, magnesium, nicotinamide and folic acid as a said at least one other active ingredient.

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50. A tablet as claimed in any preceding claim, wherein upon immersion in water a first of said zones disintegrates at a faster rate than a second of said zones such that the time for disintegration of said faster disintegrating zone as a percentage of the total time for disintegration of the faster and the slower disintegrating zones is no more than 50%.

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